May 10, 2006

Mr. Jack R. Strosnider, Director
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Strosnider:

I am writing in response to your letter of March 10, 2006, regarding the Cabot Performance Materials site in Reading, Pennsylvania. The March 10 letter notified EPA that the Cabot site triggers an NRC consultation with EPA in accordance with the 2002 Memorandum of Understanding (MOU) entitled: "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites" (OSWER No. 9295.8-06, signed by EPA on September 6, 2002, and NRC on October 9, 2002). This letter responds to the notification in accordance with Section V.D.1 of the MOU, when NRC requests EPA's consultation on a decommissioning plan or a license termination plan, EPA is obligated to provide written notification of its views within 90 days of NRC's notice.

Your letter constitutes both a Level 1 and a Level 2 consultation as specified in the MOU because no soil removal is contemplated in the proposed Decommissioning Plan (DP) for the site. Therefore, the average subsurface soil concentrations will not be changed during decommissioning activities. The DP does specify the addition of a rip-rap erosion barrier.

The views expressed by EPA in this letter regarding NRC's decommissioning are limited to discussions related to the MOU. The comments provided here do not constitute guidance related to the cleanup of sites under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) .[1] EPA's views on the matters addressed by this letter were developed from information furnished by NRC in the March 10 letter, other materials provided by NRC, and staff discussions.

EPA Consultation Views

Today's response is limited to those matters that initiated NRC's request for consultation in its letter of March 10. NRC initiated this consultation because the measured soil concentrations for

[1]Please see the memorandum entitled: "Distribution of Memorandum of Understanding between EPA and the Nuclear Regulatory Commission" (OSWER No. 9295.8-06a, October 9, 2002) which includes guidance to the EPA Regions to facilitate Regional compliance with the MOU and to clarify that the MOU does not affect CERCLA actions that do not involve NRC (e.g., the MOU does not establish cleanup levels for CERCLA sites). This memorandum may be found on the Internet at: http://www.epa.gov/superfund/resources/radiation/pdf/transmou2fin.pdf.

thorium-232 exceed the MOU trigger values.

Soil: Supplemental Standards

NRC triggered the consultation for soil on the basis of measured soil concentrations for thorium-232 in the DP exceeding the Table 1 values in the MOU. In Table 1, the 5 pCi/g soil concentrations for thorium-232 are based on soil standards developed under the Uranium Mill Tailings Radiation Control Act (UMTRCA) and implementing regulations (40 C.F.R. 192). The UMTRCA standard is often identified as an Applicable or Relevant and Appropriate Requirement (ARAR) at CERCLA sites and establishes cleanup levels for thorium-232. 40 C.F.R. 192 also contains provisions for the establishment of "supplemental standards" under some special circumstances that allow the selection and performance of remedial actions that come as close as reasonably achievable to meeting the UMTRCA standards. Supplemental standards were designed:

- for situations in which worker safety would be adversely impacted or clearly greater environmental harm would result from the remedial action necessary to attain the standards,
- for situations in which the materials do not pose a clear present or future hazard and improvements could be achieved only at unreasonably high cost, or
- where concentrations of other radionuclides are sufficiently high to constitute a significant radiation hazard.

If supplemental standards are used for the remediation of soil, EPA will generally include institutional controls as a component of the cleanup alternative to ensure the response will be protective over time. For further information regarding how EPA selects institutional controls, see "Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups" (OSWER Directive 9355.0-74FS-P, September 2000). This guidance document may be found on the Internet at: http://www.epa.gov/superfund/action/ic/guide/guide.pdf. For further information regarding how EPA interprets the soil standards of 40 C.F.R. 192 as a potential ARAR, see the "Use of Soil Cleanup Criteria in 40 CFR Part 192 as Remediation Goals for CERCLA sites" (OSWER Directive 9200.4-25, February 12, 1998). This guidance document may be found on the Internet at: http://www.epa.gov/superfund/resources/radiation/pdf/umtrcagu.pdf.

It is EPA's understanding that future land use of this site with soil contamination over the Table 1 values is highly unlikely to involve either residential use or significant worker use. NRC's compliance exposure scenarios for its dose assessment that occur after placement of the rip-rap erosion barrier involved only limited exposure to workers (no more than 10% of the work day), recreational walkers, and trespassers, without any direct contact to subsurface soils.[2]

[2]See "Radiological Assessment for Reading Slag Pile Site" Revision 3, June 2005.

In EPA's view, NRC should select institutional controls to ensure limited access to the portion of the site with thorium contamination in excess of the Table 1 value. If Cabot were a CERCLA site, and EPA had made the same determination that NRC did that human exposure to the thorium-232 contaminated soil was expected to be very limited, EPA might consider the selection of supplemental standards. However, when selecting supplemental standards, EPA would likely have selected institutional controls consistent with the exposure assumptions underlying the establishment of the supplemental standards as part of its remedy decision. It should be noted that if the unlikely situation occurred of the site being converted to residential land use, the Table 1 value for thorium-228 would be exceeded. EPA generally uses more than one institutional control to ensure that a restrictive land use continues. This helps avoid returning to the same site later to conduct further remedial actions because of an unexpected change in the land usage of the site.

Conclusion

EPA staff will remain available to NRC for consultation if needed at the site. If you have any questions regarding this letter, please contact Stuart Walker of my staff at (703) 603-8748.

Sincerely,

/s/ mbc

Michael B. Cook, Director
Office of Superfund Remediation and
Technology Innovation